

2010

Pesticide Safety 2010 - Groundwater, Zone II and Regs in Cranberry

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Groundwater Protection (Zone II) & Pesticide Regulations

Brian Wick
Director, Regulatory Services
Cape Cod Cranberry Growers' Association



Groundwater Protection Regulations

Intended to prevent contamination of public drinking water supply wells through regulating the application of pesticide products on the Groundwater Protection List within primary recharge areas.



In Other Words...

Certain Ag chemicals have more potential to leach through soil.

These chemicals could be picked up by high-pumping volume wells.



Definition: Primary Recharge Area

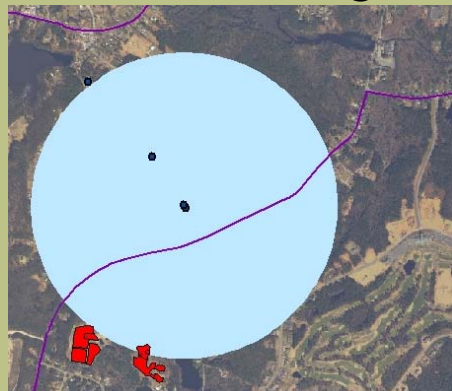
- Interim Wellhead Protection Area (IWPA)
- Zone II



Definition: IWPA

Interim Wellhead Protection Area

- Temporary protection prior to approved Zone II
- Protected recharge area around a well
- ½ mile radius
- Eventually become a Zone II





Definition: Zone II

- Groundwater movement model
- Area surrounding a well that supplies water during the driest 180-days with no recharge from rain
- Bounded by groundwater divides and bedrock, till, etc.
- Various shapes
- Can change over time



Definition: Primary Recharge Area

- For simplicity,
Primary Recharge Area is a Zone II.
- Zone II's are updated yearly by the state
- Regulations ONLY apply to public drinking water wells permitted to pump greater than 100,000 gallons of water per day.



Are You Subject to the Regulations?

Step 1: Determine if your cranberry bog is
in a Zone II area



Wellhead Protection List 2009

Cranberry Growing Region:

All cranberry towns contain Zone II areas within their boundaries.



Are You in a Zone II?

Zone II determinations can be made at:

- CCCGA Office
- PCCD Farm Planning Office
(USDA/NRCS Wareham Field Office)



Are You in a Zone II?

Zone II Maps Available at:

- www.cranberries.org
- UMass Cranberry Station
- Ag Suppliers
- MDAR
(www.mass.gov/agr/pesticides/water/ZoneIIAreas.htm)
- MassGIS Web Site
(http://maps.massgis.state.ma.us/massgis_viewer/index.htm)
- MassDEP



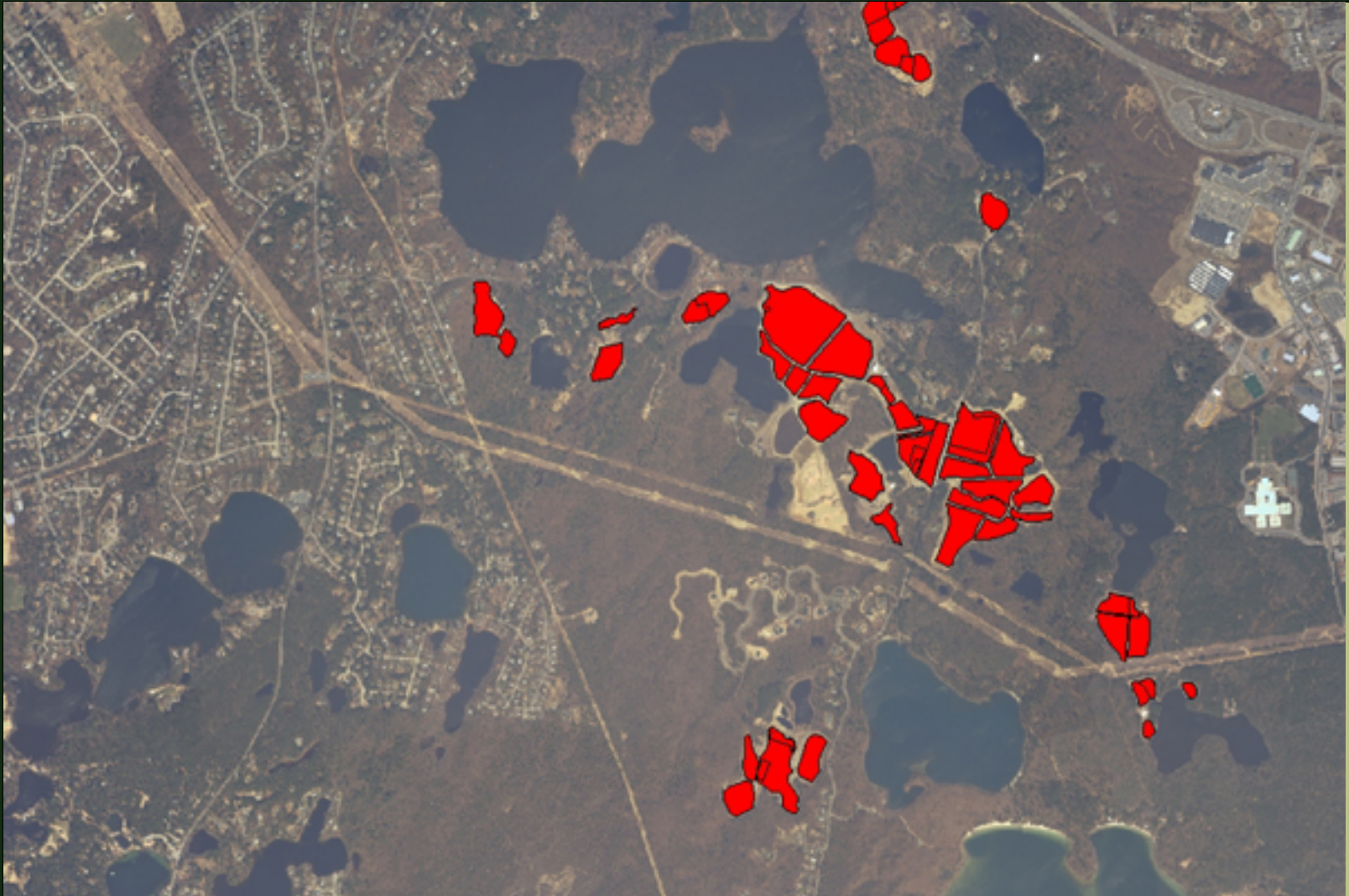


Southeastern MA



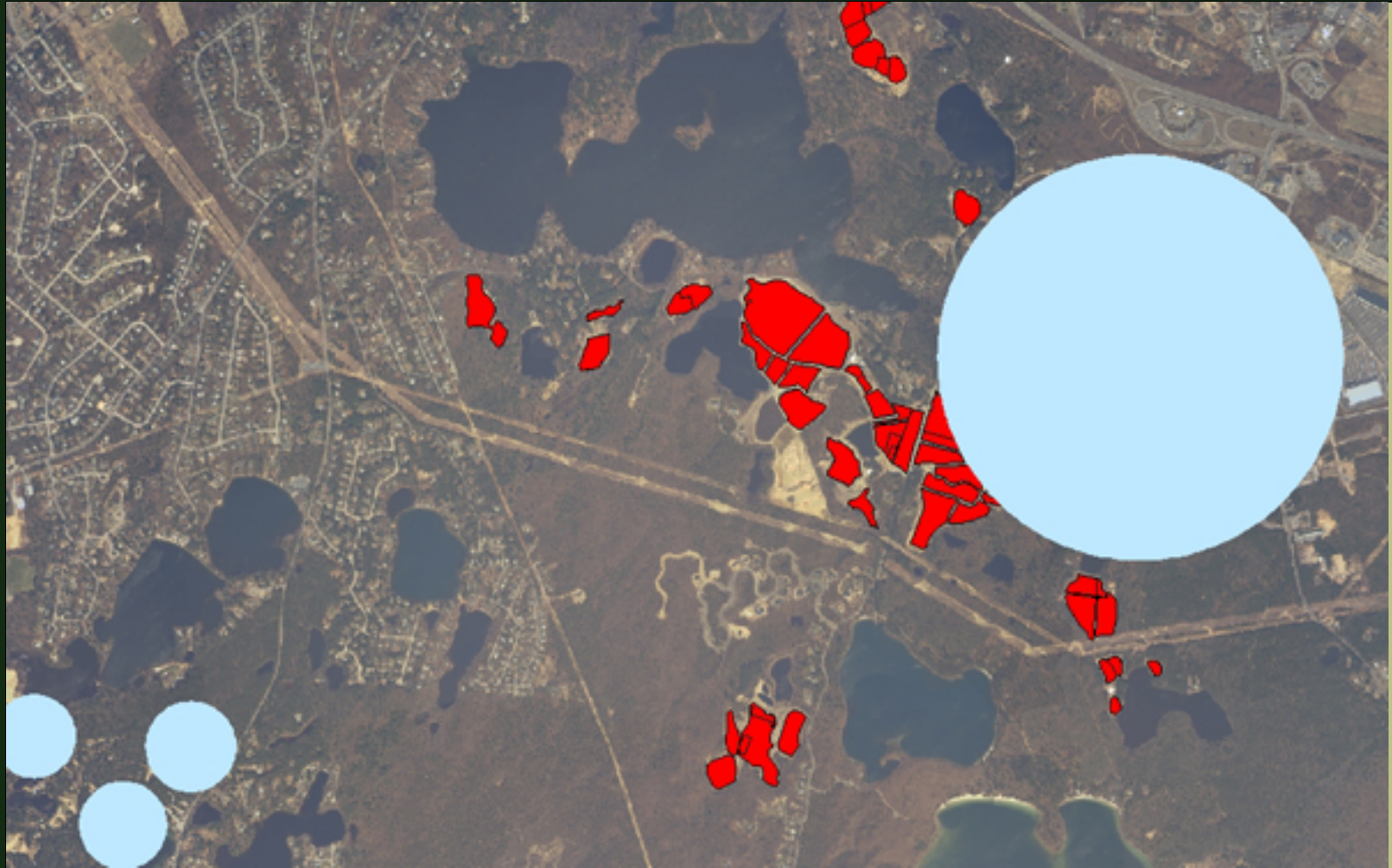


Cranberry Bogs



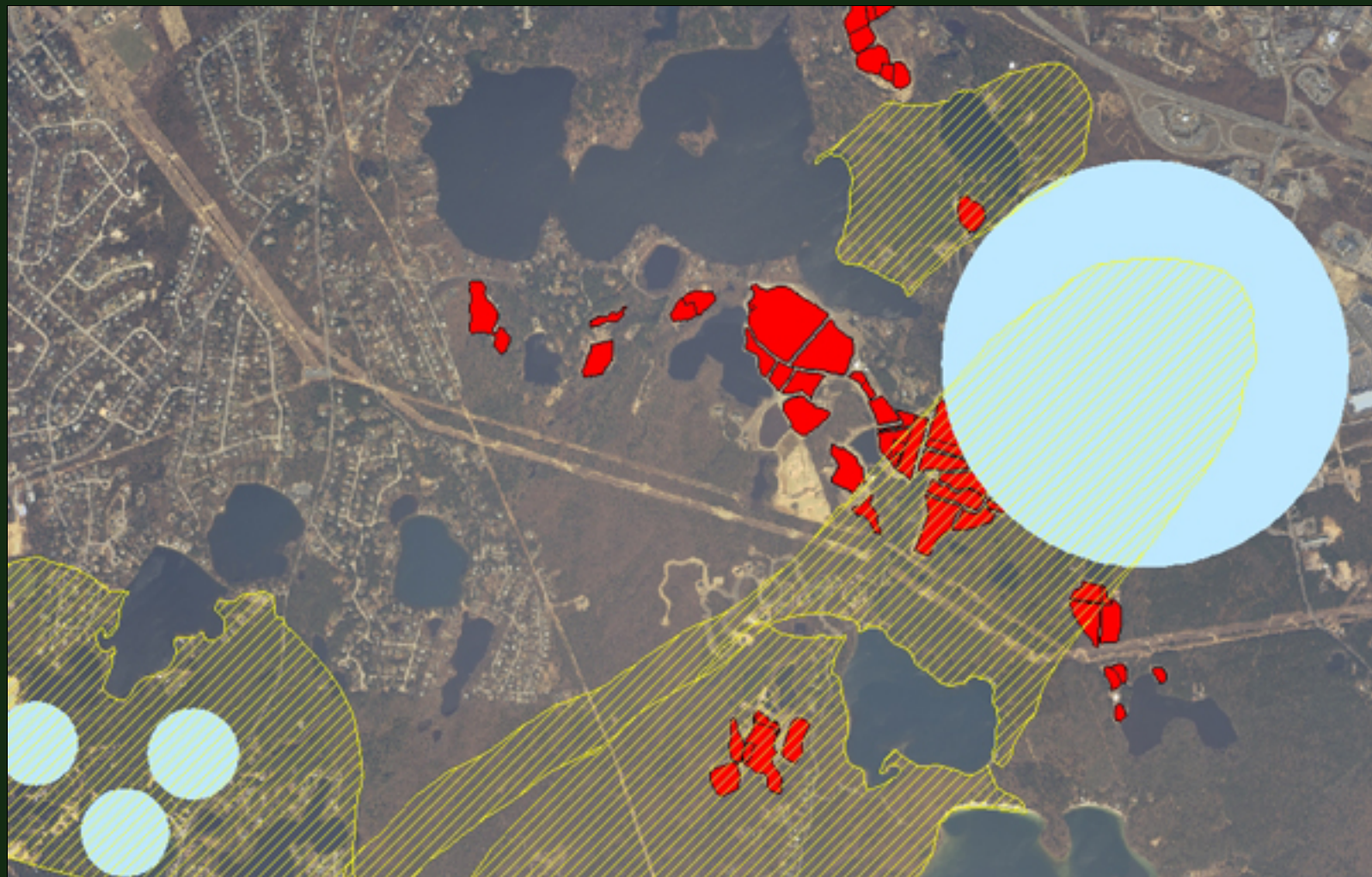


Bogs With IWPA





Bogs With IWPA & Zone II





Bogs With IWPA & Zone II





CCCGA Web Site Maps

www.cranberries.org/growers/alerts_zone2.html



Cape Cod Cranberry Growers' Association
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The Cape Cod Cranberry Growers' Association, established in 1888, is one of the oldest farmer organizations in the country. By maintaining focus on grower issues, the goal of the Association is to "*Enhance the economic viability of the Massachusetts cranberry grower*". Our mission is to support and promote the cranberry growers of Massachusetts.

Inside this web site is information for both members and the public alike. Come explore and learn more about the unique aspects and history of Massachusetts cranberry agriculture, cranberry recipes, industry news and more.

Web Site Highlights

-  [Cranberry Recipes](#)
-  [Ice Sanding Cranberry Bogs](#)
-  [Neighbor to Neighbor Brochure](#)

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CCCGA Web Site Maps



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Grower Alerts & Information

Select from the category listed below. Grant information can be found [here](#).

[Dam Safety](#)

updated Jan2009

[DOR \(Dept. of Revenue Ch. 61/Abatements/Farm Plates\)](#)

updated Jan2009

[GAP](#)

updated May2008

[Irrigation Automation Systems Report](#)

updated Jan2008

[Pesticide Use Reporting](#)

updated Mar2010

[RMV Inspections](#)

updated Jan2009

[Water Management Act](#)

updated Jan2010

[Zone II \(Groundwater Protection Areas\)](#)

updated Apr2009



2008 Pesticide Report Forms Due

(posted March 2010)

2009 Pesticide Use Report forms are due to the Massachusetts Department of Agriculture's Division of Crop Inspectional Services by **May 15, 2010**. Failure to submit this report will result in loss of eligibility for renewal of your pesticide license. Each certified or licensed pesticide applicator is accountable for the submission of their Pesticide Use Report.

[2009 Pesticide Use Report](#) (PDF: 216KB)

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CCCGA Web Site Maps

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Zone II Information

(updated April 2009)

The MA Department of Agricultural Resources must be notified of any applications of a product on the Groundwater Protection List **within 10 days of the end of each month**. This form should include all applications made during that month. You do not need to include chemicals that are not on Groundwater Protection List. You may use one form to report multiple applications that occurred in the same month.

Notification Form: [PDF Form](#) (15 KB) 

MDAR Web Site: [Electronic Notification Form](#)

The CCCGA Zone II maps can be viewed by county and town. Links to the Groundwater Protection Regulations grower advisory and pesticide notification forms can be found here as well. [Learn more.....](#)

[Back to top](#)

If you don't have a PDF reader installed on your computer, you can download free software at the [Adobe web site](#).



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Growers ~ [Alerts](#) ~ [Zone II](#)

2009 Zone II Information

Below are links to the 2009 Zone II maps (Groundwater Protection Areas) listed by county. There has been only slight changes noted on the 2009 Zone II maps, with little to no impact to cranberry production visible. However, all growers should verify their own acreage for accuracy. In many instances you may need to look at more than one map in order to find your bog. If your particular bog is not located on any of the maps or if you have any problems or questions, please contact the CCCCga office by [email](#) or phone at 508-866-7878.

For more information on Zone II's, please read the Grower Advisory on [Groundwater Protection Regulations for 2009](#) (PDF: 68KB) . Download a [Notification Form](#) (PDF: 15KB)  for applying products on the groundwater protection list or submit usage [electronically](#) at the Massachusetts Department of Agriculture web site.

Go To Maps Of: [Barnstable County](#) | [Bristol & Norfolk County](#) | [Plymouth County](#)



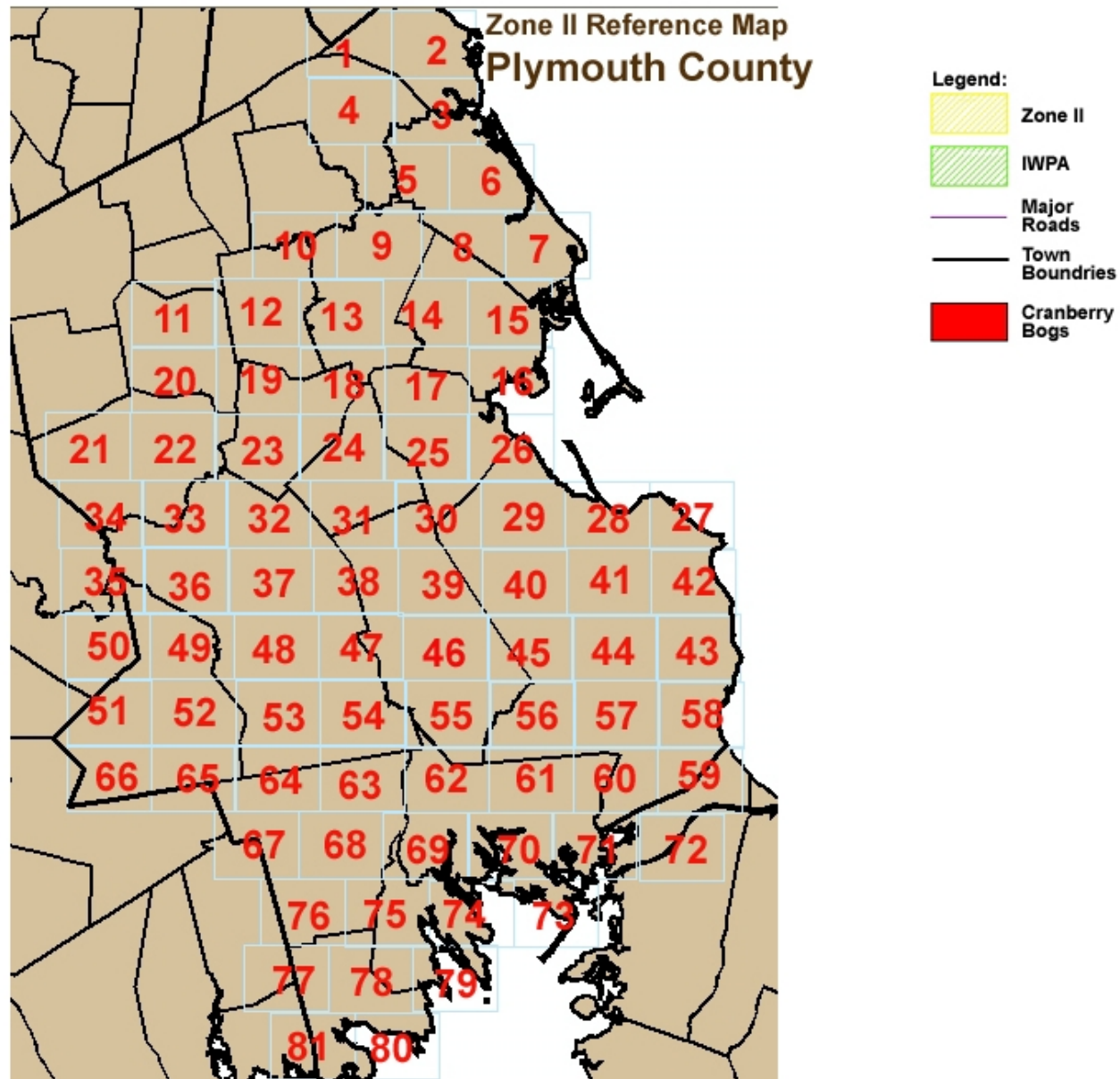
Disclaimer:

The Cape Cod Cranberry Growers' Association (CCCCGA) has provided these maps as a service to its members. The CCCCga makes every effort to provide updated information in these maps but cannot guarantee an exhaustive listing of all Zone IIs and IWPA's as this information is updated yearly by the Massachusetts Department of Environmental Protection. By using these maps the user absolves the CCCCga from liability associated with Zone II and IWPA applications and any resulting lapse in reporting requirements.





CCCGA Web Site Maps





CCCCGA Web Site Maps

Options for reading the maps:

- 1) Click on the **red number** in the squares above to open a close-up map of that area
- 2) [Scroll through all](#) Plymouth County maps
- 3) **Select by town** from the list below and scroll through all maps for that town

[Bourne](#)

[Hanson](#)

[Norwell](#)

[Bridgewater](#)

[Kingston](#)

[Pembroke](#)

[Carver](#)

[Lakeville](#)

[Plymouth](#)

[Duxbury](#)

[Marion](#)

[Plympton](#)

[East Bridgewater](#)

[Marshfield](#)

[Rochester](#)

[Halifax](#)

[Mattapoisett](#)

[Scituate](#)

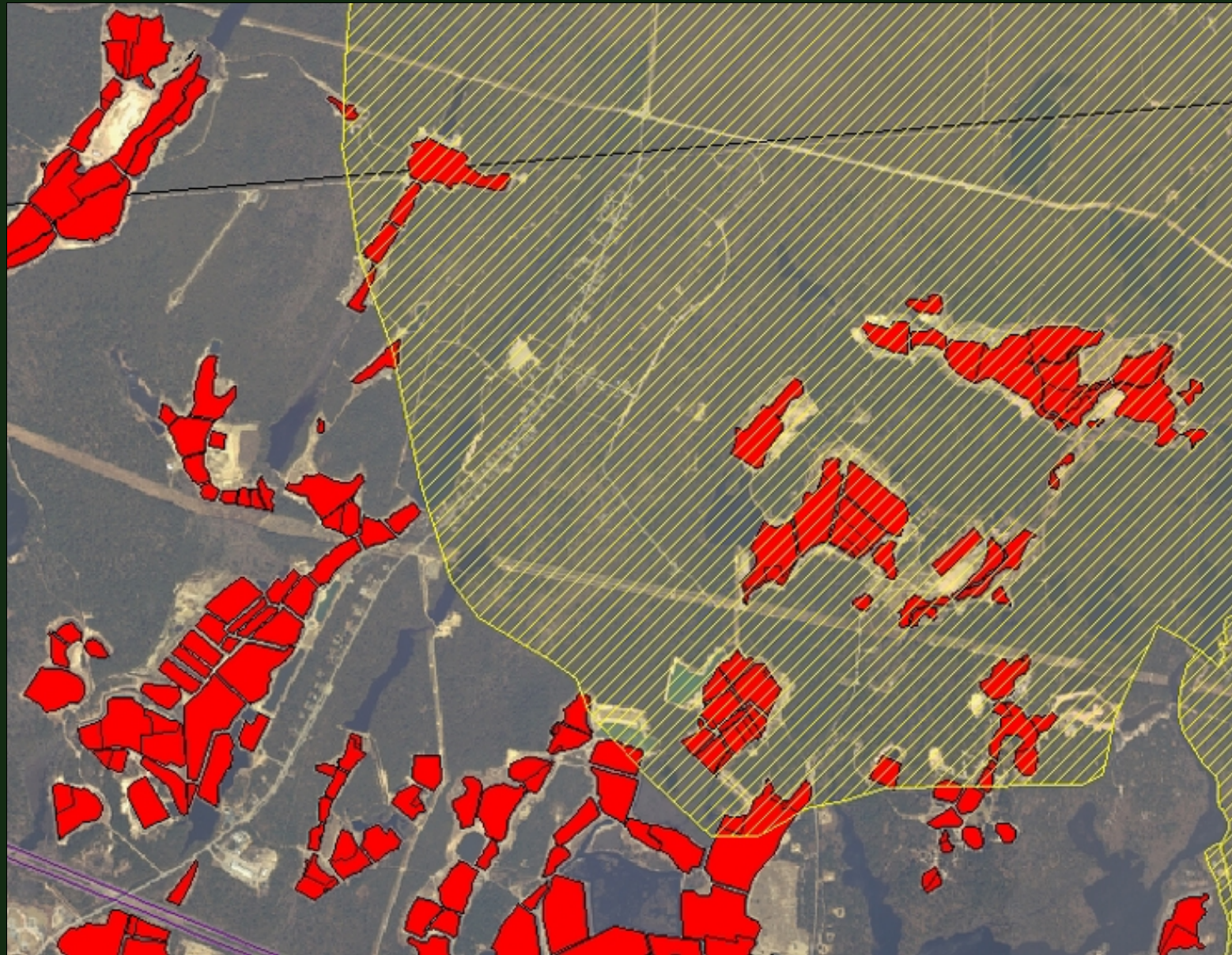
[Hanover](#)

[Middleborough](#)

[Wareham](#)

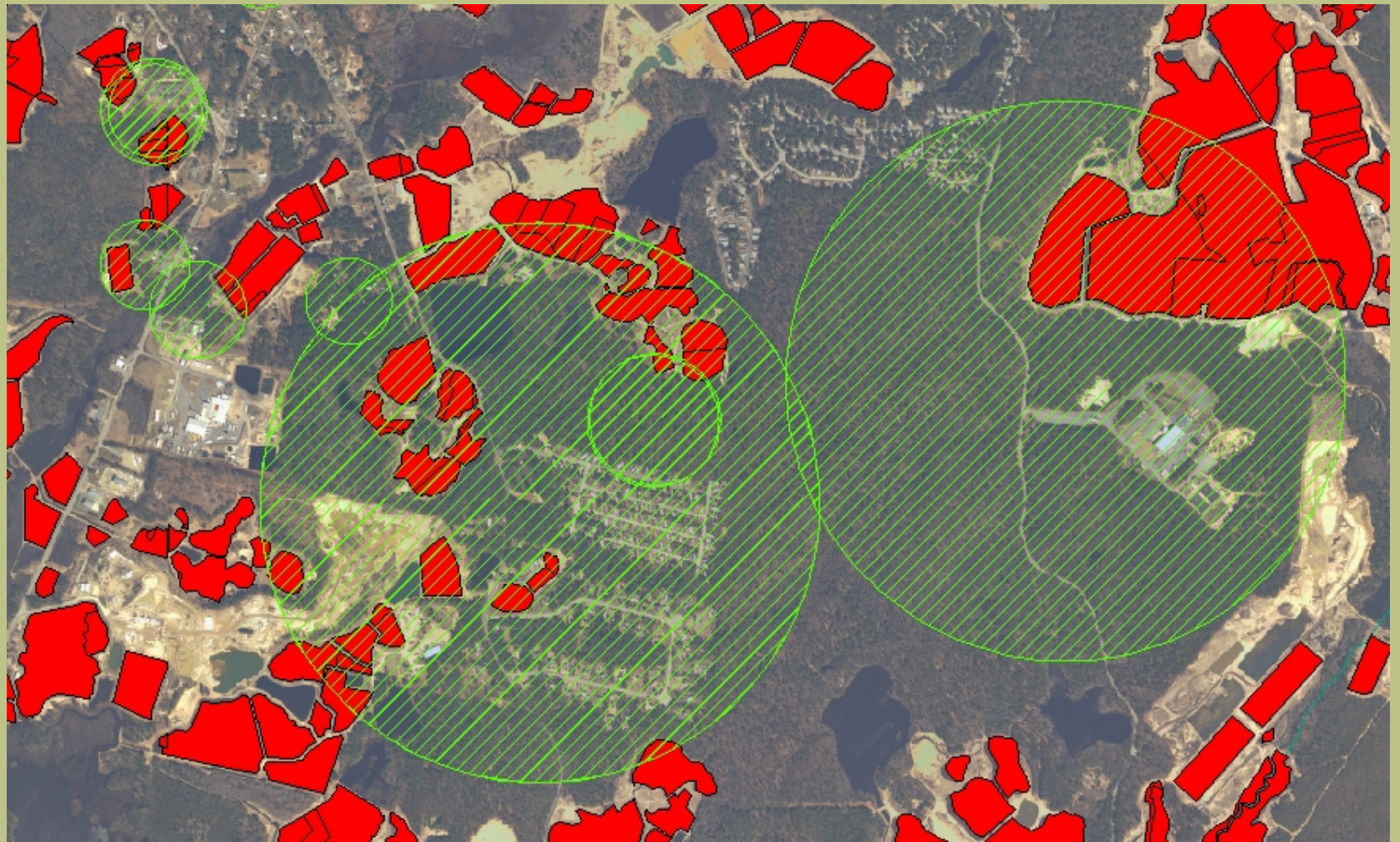


CCCGA Web Site Maps





CCCGA Web Site Maps





Are You Subject to the Regulations?

Step 1: Determine if your cranberry bog is in a Zone II area

Step 2: Check the cranberry pesticides on the groundwater protection list



Cranberry compounds on the Groundwater Protection List

How many cranberry compounds are on the state Groundwater Protection List?

4





Cranberry compounds on the Groundwater Protection List

EXCEPTIONS

- Chlorothalonil – Bravo, Echo, Equus

NO EXCEPTIONS

- Methoxyfenozide – Intrepid
- Simazine – Princep, Caliber
- Thiamethoxam – Actara

Change in 2010

A red arrow points from the text "Change in 2010" to the word "Actara" in the list above.



CHLOROTHALONIL

**BRAVO, ECHO, EQUUS,
CHLORONIL, CHLOROTHALONIL 720**

You cannot use Chlorothalonil products in a Zone II area unless you can document that you have **tried alternatives** in the past, at this same location and they **failed**.



THIAMETHOXAM

ACTARA

This compound **CANNOT** be used in Zone II areas.

There are available alternatives.

(Avaunt in spring, Belay in summer)

NB: Check with handler before using Belay



METHOXYFENOZIDE

INTREPID

This compound **CANNOT** be used in Zone II areas.

There are available alternatives.



SIMAZINE

CALIBER, PRINCEP

This compound **CANNOT** be used in Zone II areas.

There are available alternatives.



Are You Subject to the Regulations?

Step 1: Determine if your cranberry bog is in a Zone II area

Step 2: Check the cranberry pesticides on the groundwater protection list

Step 3: Requirements for existing producing cranberry bogs



Requirements for Producing Bogs

- >50% foliar coverage
- No viable alternatives for the pesticide
- IPM plan from MDAR approved sources
 - 2010 Cranberry Chart Book
 - UMASS Extension IPM fact sheets
- IPM program specific to GP regs
- Support letter from UMass Extension and/or relevant section from Chart Book
- Documentation that past alternatives failed



Requirements for New Plantings

Step 1: Determine if your cranberry bog is in a Zone II area

Step 2: Check the cranberry pesticides on the groundwater protection list

Step 3: Requirements for existing producing cranberry bogs

Step 4: **Requirements for new plantings**



Requirements for New Plantings

For a pesticide product which is soil applied or applied to an area with less than 50% foliar ground cover

- There is no viable alternative for the use of the pesticides on the Groundwater Protection List
- A Pesticide Management Plan (PMP) for that use pattern has been approved by the MDAR. A PMP is developed specifically for new plantings in a Zone II area.



PMP Approval Process

- The MDAR, MassDEP and the Department of Public Health will review the plan
- MDAR must respond within 60 days

Criteria:

- The anticipated use site is not a highly vulnerable site
- There is unlikely to be an unreasonable adverse effect on the environment
- There is no viable alternative control method
- The product has not been detected as a result of a groundwater monitoring program



Are You Subject to the Regulations?

Step 1: Determine if your cranberry bog is in a Zone II area

Step 2: Check the cranberry pesticides on the groundwater protection list

Step 3: Requirements for existing producing cranberry bogs

Step 4: Requirements for new plantings

Step 5: Submission form requirements



Submission Form Requirements

- MDAR must be notified of any applications of a product on the Groundwater Protection List **within 10 days of the end of each month.**
- Include all applications made during that month
- Do not include chemicals that are not on Groundwater Protection List
- May use one form to report multiple applications that occurred in the same month

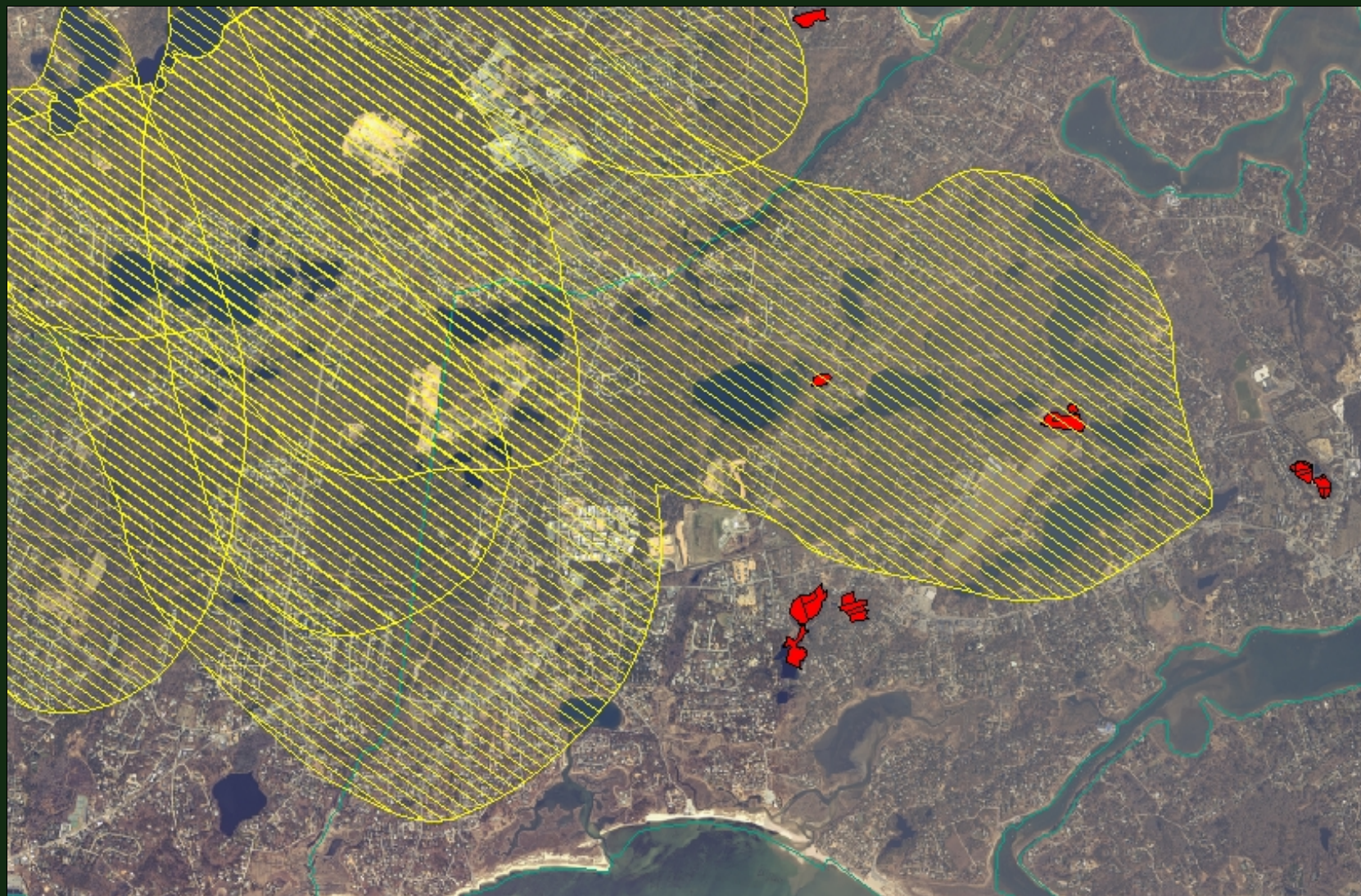


Submission Form Requirements

- MDAR Web Site
(www.mass.gov/agr/pesticides/water/cranberry.htm)
- CCCGA Web Site
(www.cranberries.org/growers/alerts_zone2.html)
- CCCGA Grower Advisory



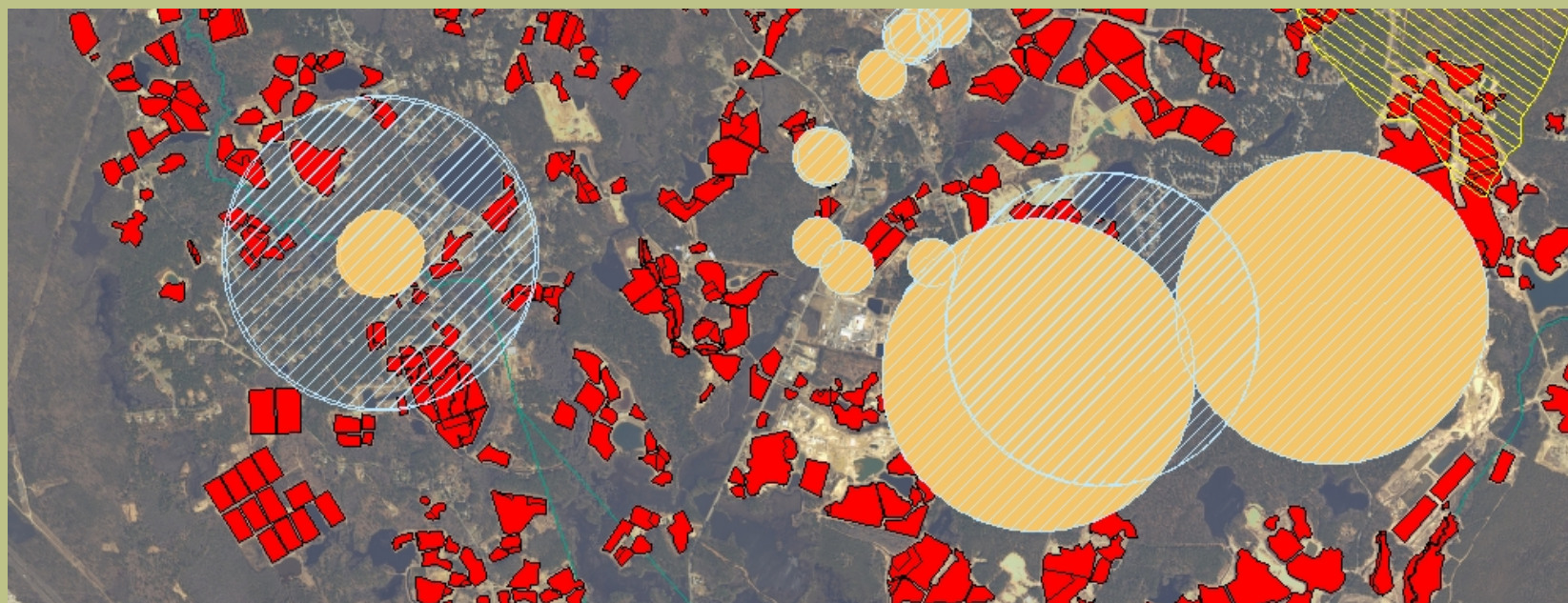
Zone II Changes Found in 2010



Chatham



Zone II Errors

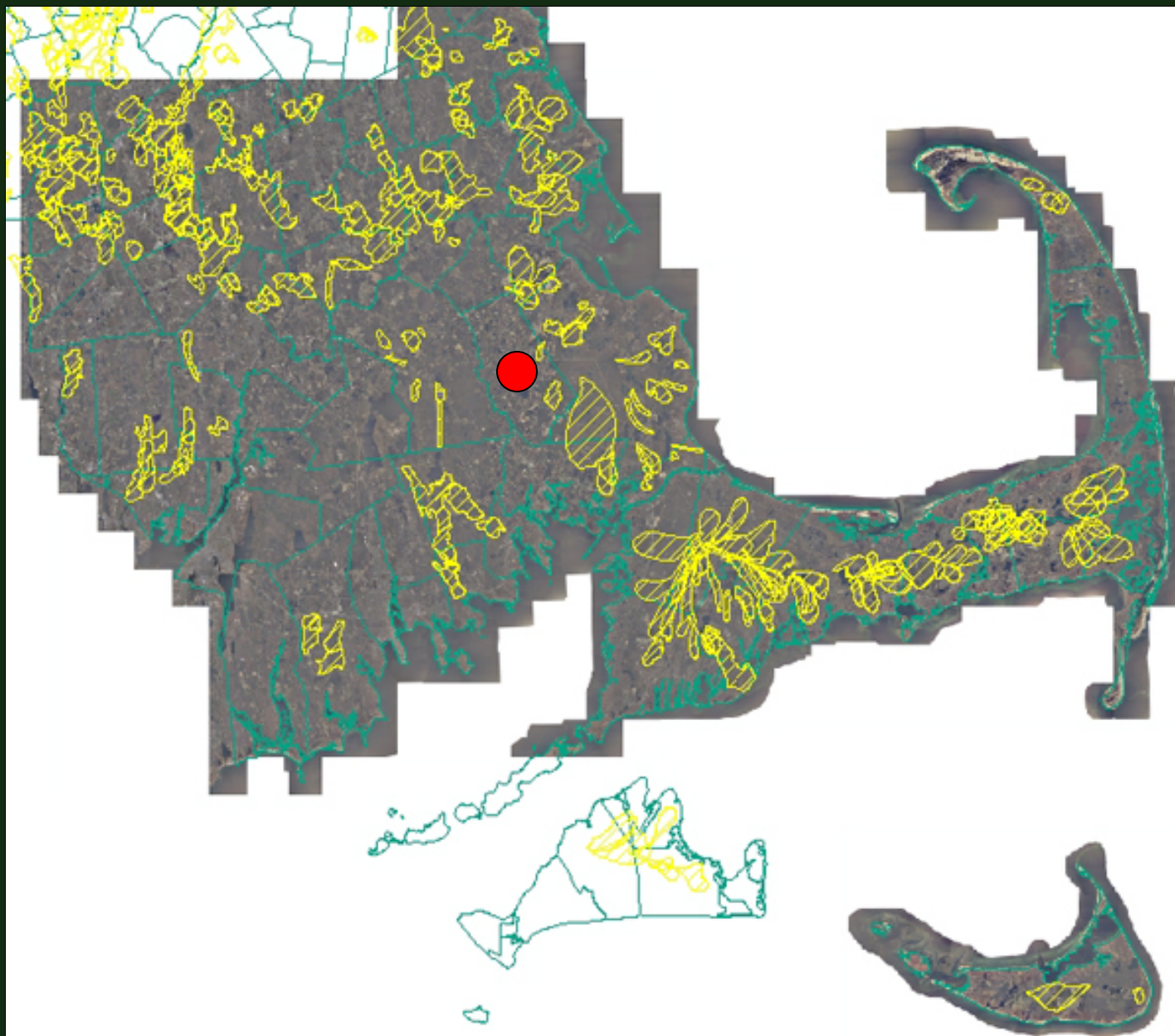


Middleboro/Carver: Pine Street, Bates Pond

South Carver: Wareham Street – Federal Road

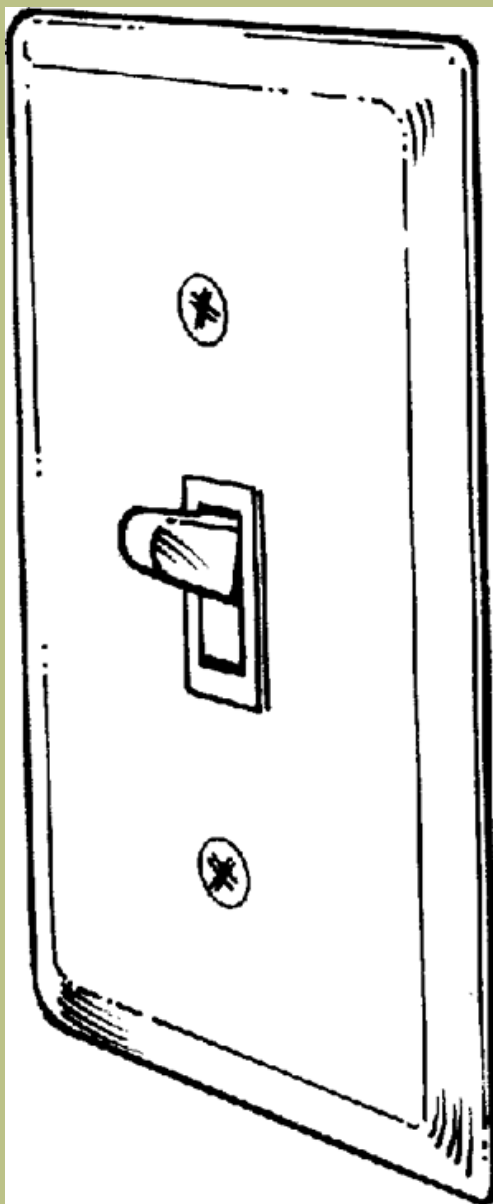


All Zone II Areas





Making a "Switch"





Sign Posting Regulations

- State Regulations
- Federal Regulations
- Restricted Use Chemicals
- Signal word **"Danger"**



Sign Posting: State

Restricted Use Pesticide & "Danger", 50 feet from public way

- Post every 200 feet
- Post 2-24 hours before app
- Remove no sooner than 48 hrs after application or before REI expires
- Remove no later than 48 hours after REI expires





Sign Posting: State

Aerial application 500 feet from protected area

- Post at principal entrances facing public roads
- Post at least every 200 feet
- Post 2-24 hours before app
- Remove no sooner than 48 hrs after application or before REI expires
- Remove no later than 48 hours after REI expires





Sign Posting: Federal

Federal Restricted Use Pesticides & "Danger", 300 feet from sensitivity area

- Post at usual points of entry
- Post no sooner than 24 hours before app
- Remove within 3 days of application or after REI expires





No Trespassing

Do not make signs permanent or use as No Trespassing signs!

- Illegal (not in compliance with regs)
- Boy who cried wolf syndrome





Sign Posting Grower Advisory

- CCCGA 2010 Sign Posting Grower Advisory to be mailed shortly
- Online: www.cranberries.org/growers/advisories.html



Thank You!





Products Requiring Sign Posting

- Weedar 64
- Vapam
- Bravo Ultrex, Echo 90DF
- Champ
- Mankocide
- Nu-Cop